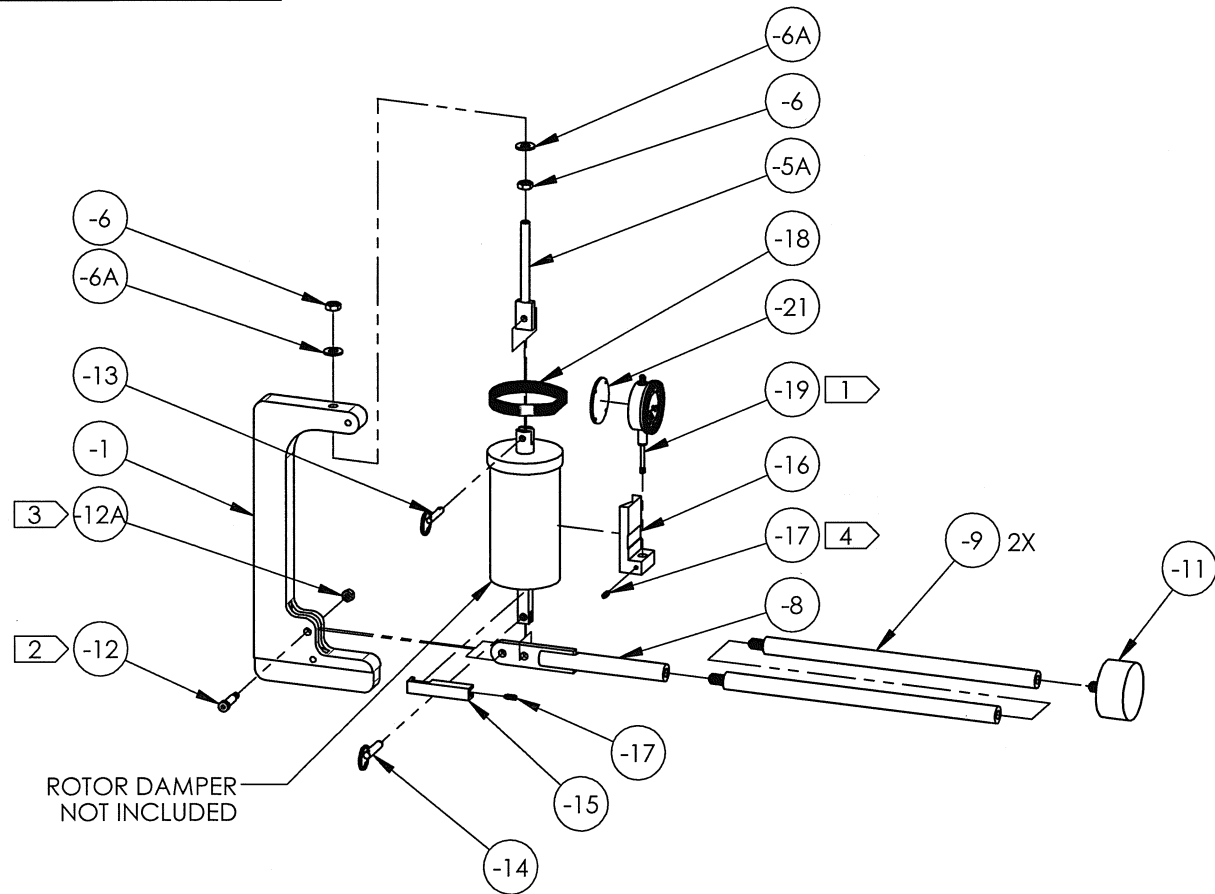
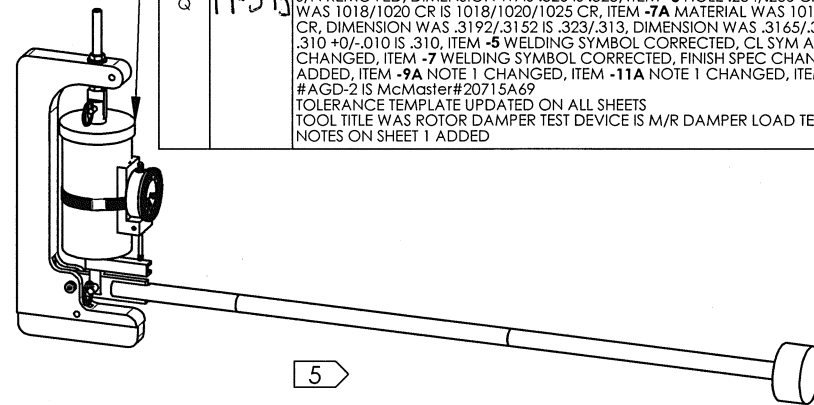


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ROTOR DAMPER
NOT INCLUDED



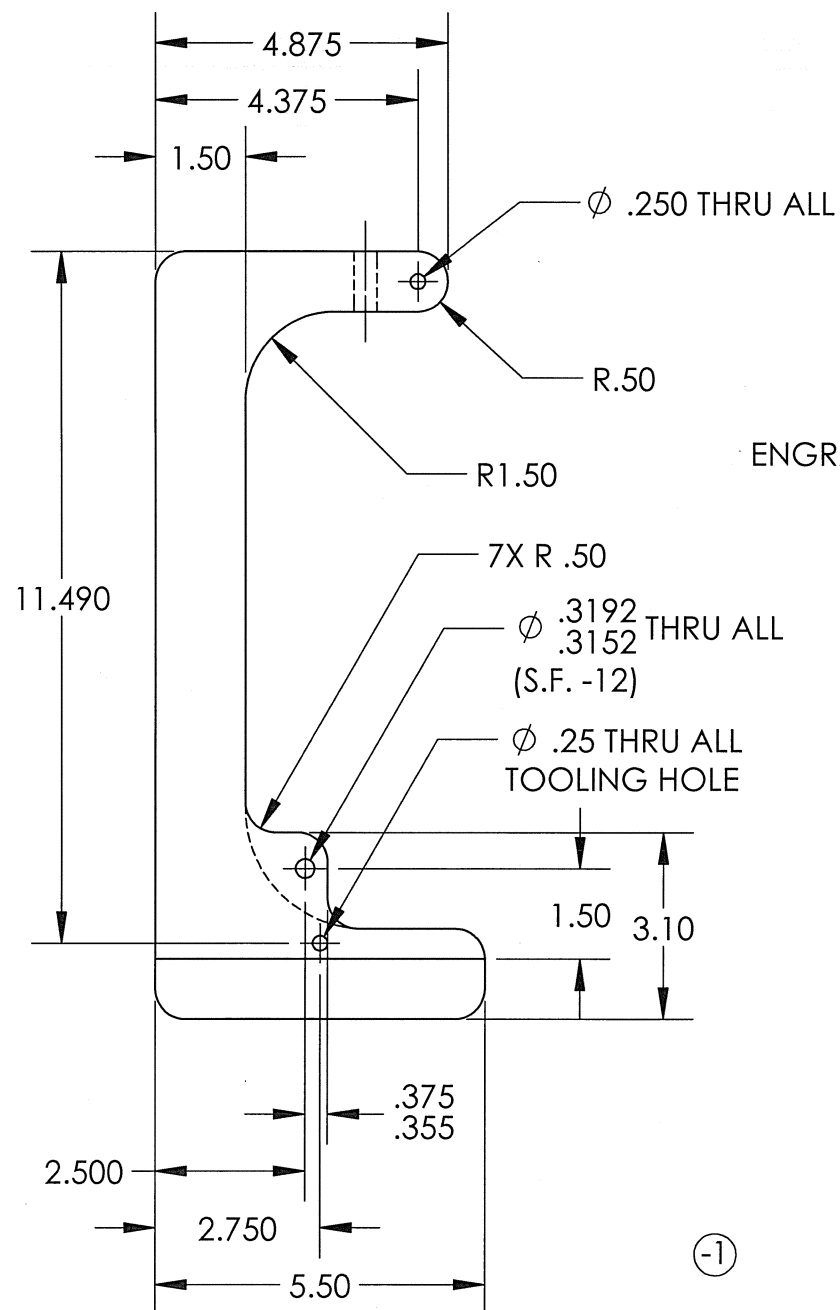
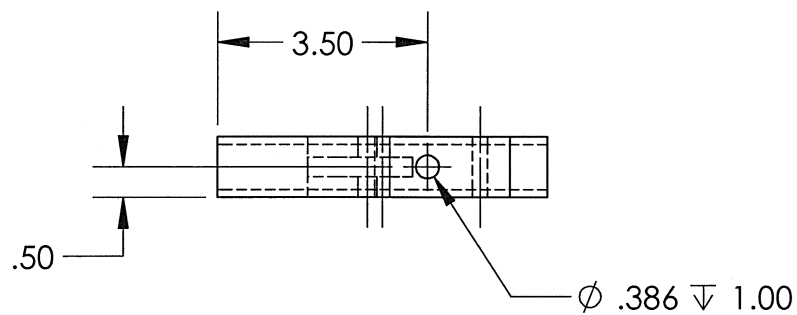
- NOTE:
- 1) CALIBRATED UPON CUSTOMER REQUEST.
 - 2) APPLY RED THREADLOCKER LOCTITE 263/262 ON THREADS OF ITEM -12 THEN ASSEMBLE WITH ITEM -12A AND REMOVE EXCESS
 - 3) TORQUE ITEM -12A TO 60-85 IN-LBS
 - 4) INSTALL ITEM -17 HAND TIGHT
 - 5) THE TOOL ASSY MUST BE PACKAGED WITH A DESICCANT BAG INTO A TIGHT FITTING SEALED PLASTIC BAG

REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
1		-10 WAS CUT STUDS; -16 TOLERANCE REDUCED TO ENSURE CLEARANCE FOR DIAL INDICATOR.	8/17/2000	-	-
2		CUT -1 FRAME BACK TO .375 NEXT TO Ø5/16 HOLE FOR CLEARANCE.	10/30/2001	-	-
3		CHANGED -1 SCREW HOLE FROM "REAM TO .3125"; -11 ADDED MACHINE TO WEIGHT & SEE TESTING & ENGRAVING; ALSO CREATED A TESTING & WEIGHT CERTIFICATION DWG.	8/16/2007	WP	RW
4		COMBINED NINE FILES INTO ONE; INSTALLED NEW TITLE BLOCK, BOM, & REV. TABLE; CREATED CUSTOMER NEW DWG'S; SEPARATED -5 THREADED ROD & -5 TOP BOLT TO -5 TOP BOLT WELDMENT & -5a ALL THREAD; SEPARATED -7 TAB & -7 PIVOT BAR TO -7 PIVOT BAR WELDMENT & -7a PIVOT BAR TAB; CHANGED -12 Ø5/16x1 PIN TO -12 SCREW & -12a NYLOCK NUT; CHANGED STAKE OR PIN -10 TO USE LOCTITE 609.	11/29/2007	WP	RW
5		ADDED SUPPORT SUPPORT WEIGHT NOTE TO CUSTOMER INSTRUCTIONS, AND -9 MUST REMAIN LEVEL TO TESTING INSTRUCTIONS. PER DAVE'S NOTES.	11/29/2007	WP	DW
6		CHANGED -1 PIVOT HOLE FROM Ø.257 TO Ø5/16 REAMED; -7a PIVOT HOLE FROM Ø.257 TO Ø5/16 REAMED; AND -12 FROM SOCKET HEAD CAP SCREW 1/4-20 X 1-1/2 TO SOCKET HEAD SHOULDER BOLT Ø5/16 X 1. APPLIED PHANTOM BOXES TO PARTS FOR CLARITY. UPDATED CUSTOMER DWGS.	6/17/2009	WP	G.E.
6A		CORRECTED DIM P/N -5a FROM 1/2-24 UNF.	7/30/2009	RJC	
7		CH'D P/N -10 SETSCREW DEPTH TO .75 PER G.E.	9/28/2009	RJC	
8		CHANGED INSIDE HOLE ON -7A FROM Ø.313 TO REAM Ø.3125. ALSO CORRECTED ERROR IN BOM, -14 WAS REED #FFSC-4-10, NOW #FFSC-5-10R.	9/28/2009	WP	
8A		CH'D Ø.375 REAMED TO THRU PER G.E.	8/24/2010	WP	G.E.
8B		ADDED CUSTOMER INFO TO MANUFACTURING DWGS. PER R.W.	11/2/2010	RJC	RW
8C		ADDED -19 TO SHOW MODIFICATION OF DIAL INDICATOR AND MOUNTING PER R.W.	7/12/2011	RJC	RW
8D		CH'D TITLEBLOCK TOLERANCES FROM .XXX ±.005 & .XX ±.01 PER G.E.	2/15/2012	RJC	RW
9		MOVED ALL PARTS TO SEPARATE SHEETS. -1 ADDED Ø.25 TOOLING HOLE. -16 ADDED R.25 LEFT .30 DIM TO THEORETICAL POINT.	8/7/2013	RJC	DW
10	16-0096	UPDATED TO NEW STANDARDS. ADDED CALIBRATION NOTE. -1 CH'D DIMS WAS Ø.375 THRU IS Ø.375 W 1.00, WAS REAM Ø.3125 IS Ø.3152-3192 THRU ALL (S.F. -12), WAS 1.00 IS 2X 1.00, WAS (.125) IS .13. -3 CH'D MAT'L WAS 1018 IS 1018/1020 CR. CH'D DIM WAS Ø.250 S.F. -13 IS Ø.250-.254 THRU ALL (S.F. -13). -5A CH'D DIMS WAS 3/8-24 UNF IS (3/8-24 UNF-2A). WAS 3.625 IS 3.63. ADDED B/O #92580A109. -6 ADDED B/O #93839A815. -6A ADDED B/O #90108A417. -7 DELETED SAND TO FIT CALLOUT. -7A CH'D MAT'L WAS 1018 IS 1018/1020 CR. CH'D DIMS WAS Ø.313 S.F. -14 IS Ø.3125-.3165 THRU ALL (S.F. -14). WAS REAM Ø.313 IS Ø.3152-3192 THRU ALL (S.F. -12), WAS .310 IS .310 +.000 -.010 (S.F. -8). WAS .500 IS 2X .500. -8 ADDED RADIUS TO END OF SLOT. CH'D DIMS WAS .188 WALL IS .19. WAS .315 SLOT S.F. -7A IS .315 +.010 -.000 (S.F. -7A). -9 CH'D DIM WAS .188 WALL IS .19. -9A ADDED TO BOM. -10 ADDED B/O #91375A673. -11 REMOVED RB LOGO, ACTUAL WEIGHT, AND OPERATORS INITIALS FROM ENGRAVE NOTE. -11A ADDED TO BOM. -12A ADDED B/O #95615A120. -15 CH'D DIM WAS R.125 IS FULL R. -15 CH'D DIMS WAS R.125 IS FULL R. WAS 10-24 UNC IS 10-24 UNC-2B W 1.86. -17 ADDED B/O #92845A245. -18 ADDED B/O #5416K41.	8/4/2016	DPD	JAG
11	17-0069	-9A CH'D LOCTITE NUMBER WAS 609 IS 262. -11 CORRECTED SPELLING ON ENGRAVING WAS "CALIBRATED" IS "CALIBRATED". -11A CH'D LOCTITE NUMBER WAS 609 IS 262. -19 WAS MODIFIED IS B/O. DELETED DWG. -21 ADDED TO BOM QTY 1. -23 ADDED TO BOM QTY 1.	3/22/2017	DPD	JAG
Q 19-595		ITEM -8 MATERIAL WAS CDS IS A513 TYPE 5 DOM TUBING, DIMENSION WAS .315 +.010/-0 IS .323, DIMENSION WAS .19 IS .188, ITEM -9 MATERIAL WAS CDS IS A513 TYPE 5 DOM TUBING, FINISH SPEC CHANGED, DIMENSION WAS .19 IS .188. -11 MATERIAL WAS BRASS IS BRASS 360, ITEM -5A MATERIAL WAS MCMaster-CARR #92580A109 IS McMaster#90322A131, ITEM -12A MATERIAL WAS MCMaster-CARR #95615A120 IS McMaster#97135A210, ITEM -13 MATERIAL WAS ESSENTRA COMPONENTS #FFSC-4-10R IS McMaster#98404A250, ITEM -14 MATERIAL WAS ESSENTRA COMPONENTS #FFSC-5-10R IS McMaster#98404A250, ITEMS -1, -15 AND -16 MATERIAL WAS 6061 IS 6061/7075, DIMENSION .375 CHANGED FOR .377 +.005/-0, ITEM -1 ENGRAVING "MADE IN USA" AND S/N REMOVED, DIMENSION WAS .320 IS .323, ITEM -3 HOLE .254/.250 CHANGED FOR .257, MATERIAL WAS 1018/1020 CR IS 1018/1020/1025 CR, ITEM -7A MATERIAL WAS 1018-1020 CR IS 1018/1020/1025 CR, DIMENSION WAS .3192/.3152 IS .323/.313, DIMENSION WAS .3165/.3125 IS .328, DIMENSION WAS .310 +0/-010 IS .310, ITEM -5 WELDING SYMBOL CORRECTED, CL SYM ADDED, SPEC FOR FINISH CHANGED, ITEM -7 WELDING SYMBOL CORRECTED, FINISH SPEC CHANGED, CL SYM SYMBOL ADDED, ITEM -9A NOTE 1 CHANGED, ITEM -11A NOTE 1 CHANGED, ITEM -19 WAS PAC-WEST #AGD-2 IS McMaster#20715A69 TOLERANCE TEMPLATE UPDATED ON ALL SHEETS TOOL TITLE WAS ROTOR DAMPER TEST DEVICE IS M/R DAMPER LOAD TEST DEVICE NOTES ON SHEET 1 ADDED	2/19/2019	VM	VM

ASSY QTY	ASSY QTY	ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
					-1	1	FRAME	6061/7075		2
			1		-3		TOP BOLT TAB	1018/1020/1025 CR		3
			X		-5	1	TOP BOLT WELDMENT			4
			1		-5A		ALL THREAD	STEEL	3/8-24 (McMaster#90322A131) MODIFIED	5
				B/O	-6	2	JAM NUT	STEEL	3/8-24, GRADE 8 (MCMaster-CARR #93839A815)	1
				B/O	-6A	2	FLAT WASHER	STEEL	Ø3/8 (MCMaster-CARR #90108A417)	1
			X		-7	1	PIVOT BAR WELDMENT			6
			1		-7A		PIVOT BAR TAB	1018/1020/1025 CR		7
			1		-8		TUBE	A513 TYPE 5 DOM TUBING		8
			1		-9		EXTENSION	A513 TYPE 5 DOM TUBING		9
			X		-9A	2	EXTENSION ASSEMBLY			10
1	1			B/O	-10		SOCKET HEAD SET SCREW	STEEL	7/16-24 X 1-1/2 (MCMaster-CARR #91375A673)	10 & 12
1					-11		WEIGHT	BRASS 360		11
X					-11A	1	WEIGHT ASSEMBLY			12
				B/O	-12	1	SOCKET HEAD SHOULDER BOLT	STEEL	1/4-20 X 7/16, Ø5/16 X 1 SHOULDER (MCMaster-CARR #91259A583)	1
				B/O	-12A	1	NYLON LOCK NUT	STEEL	1/4-20 (McMaster#97135A210)	1
				B/O	-13	1	QUICK RELEASE PIN	S.S.	Ø1/4 X 1 (McMaster#98404A959)	1
				B/O	-14	1	QUICK RELEASE PIN	S.S.	Ø5/16 X 1 (McMaster#98404A250)	1
					-15	1	CLEVIS BRACKET	6061/7075		13
					-16	1	INDICATOR BRACKET	6061/7075		14
				B/O	-17	2	SOCKET HEAD SET SCREW (DOG POINT)	S.S.	#10-24 X 1/2 (MCMaster-CARR #92845A245)	1
				B/O	-18	1	HOSE CLAMP	S.S.	Ø3-1/16 TO Ø4 X 1/2 (MCMaster-CARR #5416K41)	1
				B/O	-19	1	1 in. DIAL INDICATOR		(McMaster#20715A69) Δ	15
				B/O	-21	1	FLAT BACK FOR DIAL INDICATOR		FOR AGD GROUP 2 DIAL INDICATOR (MCMaster-CARR #20625A914)	1
				B/O	-23	1	LARGE PISTOL CASE	PLASTIC	(RSR GROUP #10164)	N/S
ASSY -1A	ASSY -9A	ASSY -7	ASSY -5	B/O	DAMP ER					

DART AEROSPACE	
TITLE M/R DAMPER LOAD TEST DEVICE	
DWG NO. RBT18520	REV Q
MATERIAL UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS ± 1/8 DECIMALS ± .005 ANGLES ± 1° SURFACES = 125°	
SPEC 1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
DRAWN BY: COLE	QA APPR: LINDSAY
CHECKED: MACKOVJAK	APPROVED: WP
OPPS APPR: ANDERSON	USED ON MODEL
SCALE N/A	DATE 8/17/2000
SHEET 1 OF 17	

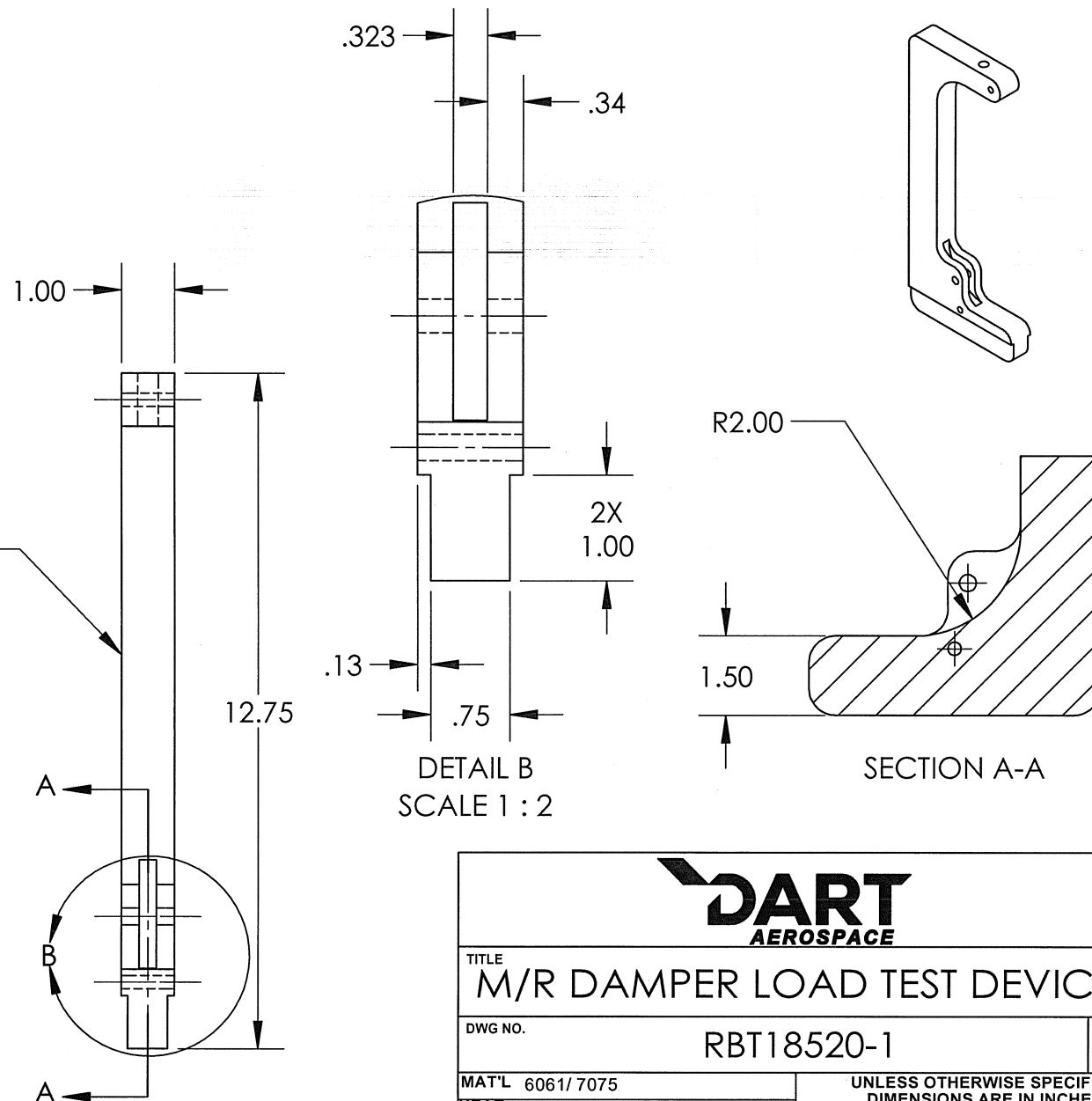
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①
FRAME

ENGRAVE T/N

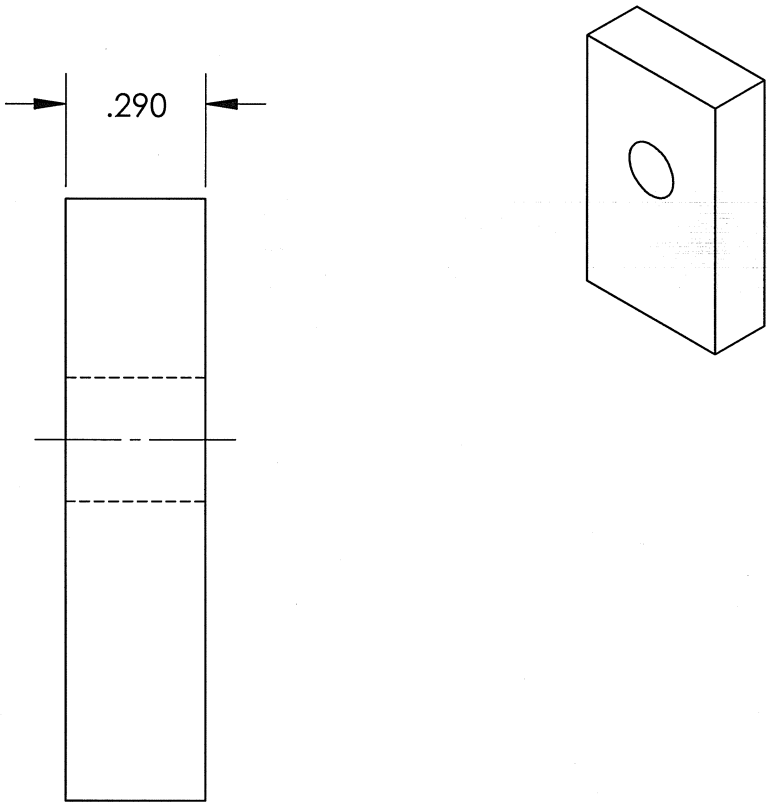
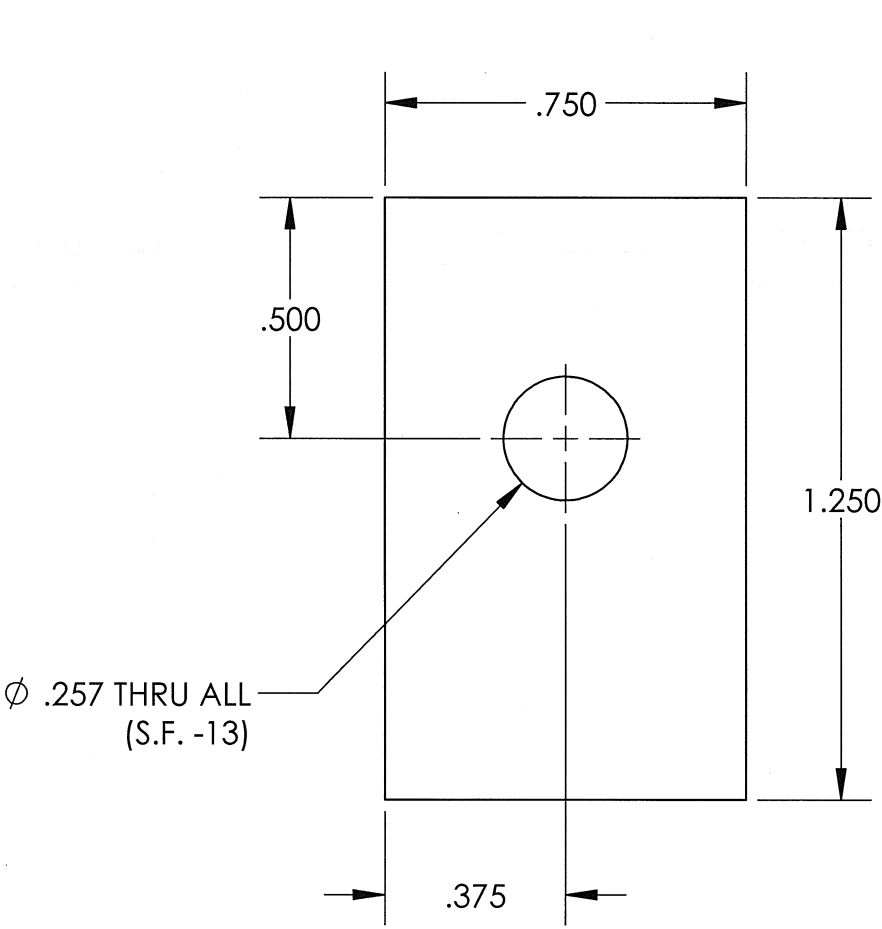
REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
6		CHANGED -1 PIVOT HOLE FROM Ø.257 TO Ø5/16 REAMED	6/17/2009	WP	G.E.
8A		CH'D Ø.375 REAMED TO THRU PER G.E.	8/24/2010	WP	G.E.
9		-1 ADDED Ø.25 TOOLING HOLE.	8/7/2013	RJC	DW
10	16-0096	-1 CH'D DIMS WAS Ø.375 THRU IS Ø.375 ± 1.00, WAS REAM Ø.3125 IS Ø.3152-.3192 THRU ALL (S.F. -12), WAS 1.00 IS 2X 1.00, WAS (.125) IS .13.	8/4/2016	DPD	JAG
Q		MATERIAL WAS 6061 IS 6061/7075, DIMENSION .375 CHANGED FOR .386, ENGRAVING "MADE IN USA" AND S/N REMOVED, DIMENSION WAS .320 IS .323	2/19/2019	VM	VM



DART AEROSPACE	
TITLE M/R DAMPER LOAD TEST DEVICE	
DWG NO. RBT18520-1	REV Q
MAT'L 6061/ 7075	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .010 FRACTIONS ± 1/8
FINISH BLACK ANODIZE	.XX ± .03 ANGLES ± 1°
SPEC MIL-A-8625F, TYPE II, CLASS II	.X ± .1 SURFACES = 125
DRAWN BY: COLE	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: MACKOVJAK	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: [Signature]	
SCALE N/A	DATE 8/17/2000
SHEET 2 OF 17	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
10	16-0096	-3 CH'D MAT'L WAS 1018 IS 1018/1020 CR. CH'D DIM WAS Ø.250 S.F. -13 IS Ø.250-.254 THRU ALL (S.F. -13).	8/4/2016	DPD	JAG
Q		HOLE .254/.250 CHANGED FOR .257, MATERIAL WAS 1018/1020 CR IS 1018/1020/1025 CR	2/19/2019	VM	VM

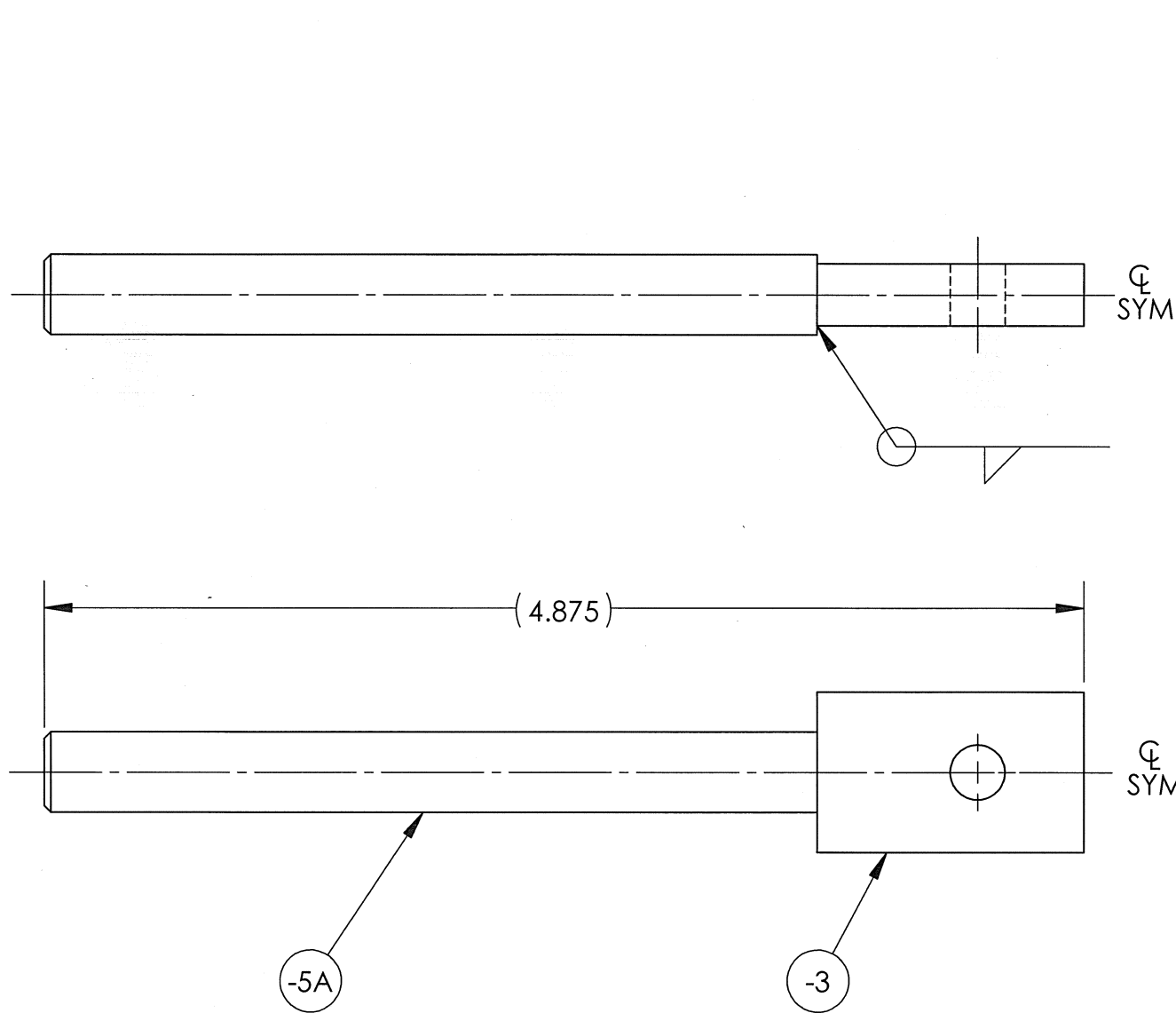


③
TOP BOLT TAB

DART AEROSPACE	
TITLE M/R DAMPER LOAD TEST DEVICE	
DWG NO. RBT18520-3	REV Q
MAT'L 1018/1020/1025 CR	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .005 FRACTIONS ± 1/8
FINISH SEE -5	.XX ± .01 ANGLES ±1°
SPEC	.X ± .1 SURFACES = 125/√
DRAWN BY: COLE	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: MACKOVJAK	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED:	
SCALE N/A	DATE 8/17/2000
SHEET 3 OF 17	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
Q		WELDING SYMBOL CORRECTED, CL SYM ADDED, SPEC FOR FINISH CHANGED	2/19/2019	VM	VM



(5)

TOP BOLT WELDMENT



TITLE
M/R DAMPER LOAD TEST DEVICE

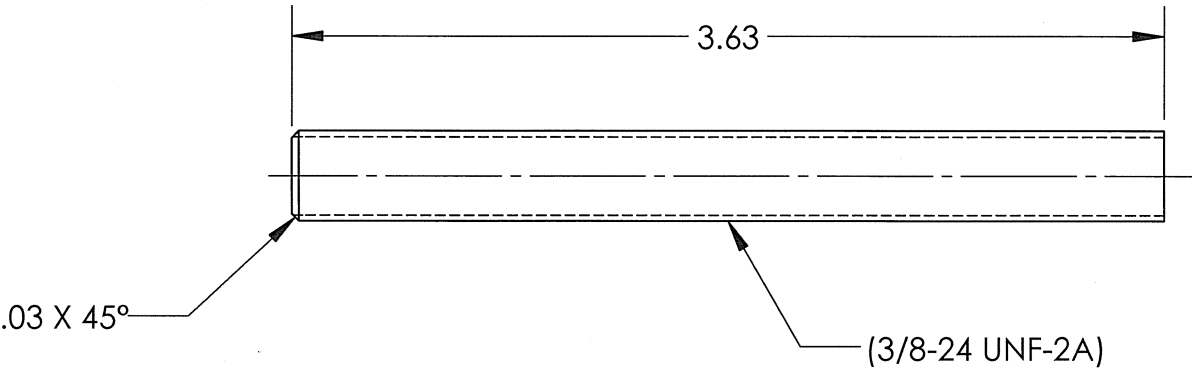
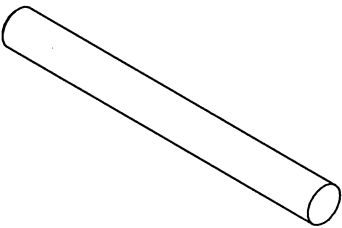
DWG NO. RBT18520-5 REV Q

MAT'L	UNLESS OTHERWISE SPECIFIED
HEAT TREAT	DIMENSIONS ARE IN INCHES
FINISH BLACK OXIDE	.XXX ± .005 FRACTIONS ± 1/8
SPEC	.XX ± .01 ANGLES ± 1°
	.X ± .1 SURFACES = 125
DRAWN BY: COLE	1. BREAK ALL SHARP EDGES
CHECKED: MACKOVJAK	.015 x 45° OR .015R
OPPS APPR: ANDERSON	2. DIMENSIONAL LIMITS APPLY
QA APPR: LINDSAY	AFTER PLATING
APPROVED: [Signature]	3. INTERPRET DIM AND TOL PER
	ASME Y14.5M-2009
	USED ON MODEL

SCALE N/A DATE 8/17/2000 SHEET 4 OF 17

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
6A		CORRECTED DIM P/N -5a FROM 1/2-24 UNF.	7/30/2009	RJC	-
10	16-0096	-5A CH'D DIMS WAS 3/8-24 UNF IS (3/8-24 UNF-2A), WAS 3.625 IS 3.63.	8/4/2016	DPD	JAG
Q		McMaster# CHANGED	2/19/2019	VM	VM

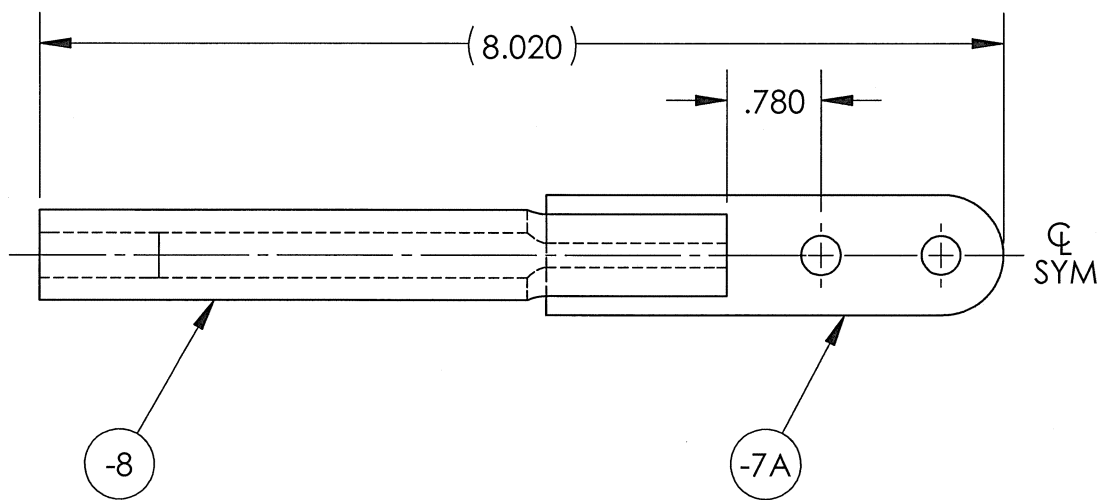
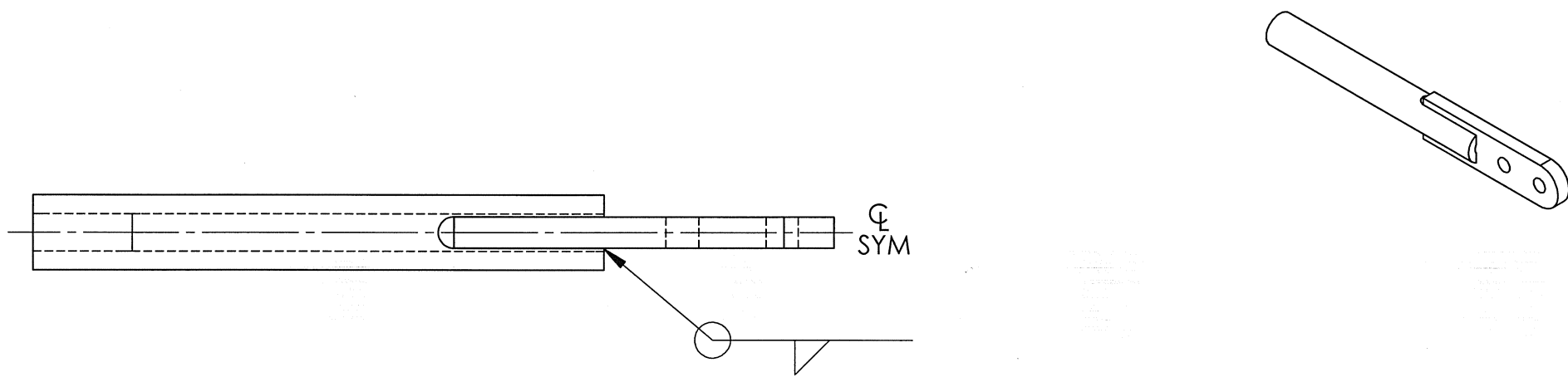


(-5A)
ALL THREAD

TITLE M/R DAMPER LOAD TEST DEVICE	
DWG NO. RBT18520-5A	REV Q
MAT'L STEEL HEAT TREAT FINISH SEE -5 WELDMENT SPEC	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 1° .X ± .1 SURFACES = 125/
DRAWN BY: COLE CHECKED: MACKOVJAK OPPS APPR: ANDERSON QA APPR: LINDSAY APPROVED:	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
USED ON MODEL	
SCALE N/A	DATE 8/17/2000
SHEET 5 OF 17	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
10		-7 DELETED SAND TO FIT CALLOUT.	8/4/2016	DPD	JAG
Q		WELDING SYMBOL CORRECTED, FINISH SPEC CHANGED, CL SYM SYMBOL ADDED	2/19/2019	VM	VM



-7

PIVOT BAR WELDMENT



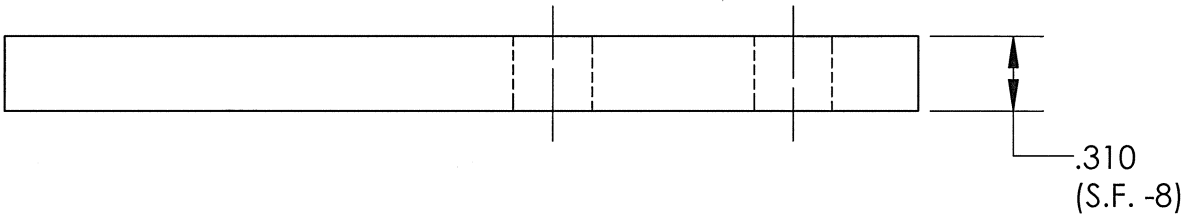
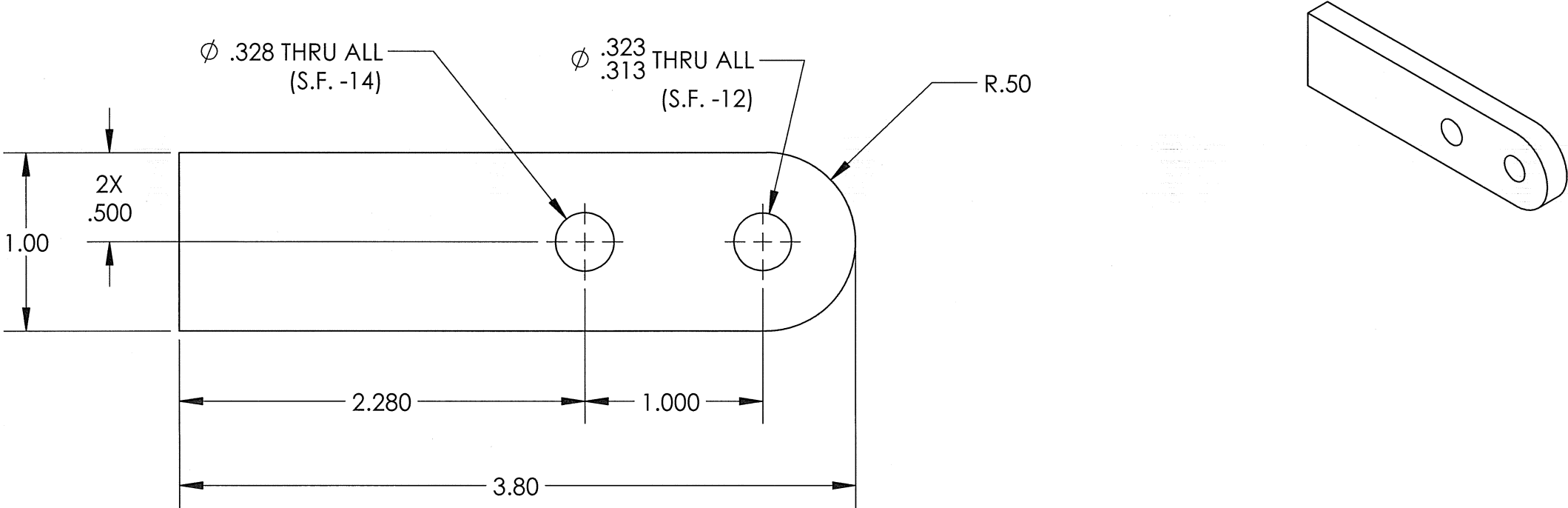
TITLE
M/R DAMPER LOAD TEST DEVICE

DWG NO. RBT18520-7 REV Q

MAT'L	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 1° .X ± .1 SURFACES = 125°	
HEAT TREAT		
FINISH BLACK OXIDE		
SPEC		
DRAWN BY: COLE	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
CHECKED: MACKOVJAK		
OPPS APPR: ANDERSON		
QA APPR: LINDSAY		
APPROVED: [Signature]	USED ON MODEL	
SCALE N/A	DATE 8/17/2000	SHEET 6 OF 17

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
10	16-0096	-7A CH'D MAT'L WAS 1018 IS 1018/1020 CR. CH'D DIMS WAS Ø.313 S.F. -14 IS Ø.3125-.3165 THRU ALL (S.F. -14). WAS REAM Ø.313 IS Ø.3152-.3192 THRU ALL (S.F. -12), WAS .310 IS .310 +.000 -.010 (S.F. -8), WAS .500 IS 2X .500.	8/4/2016	DPD	JAG
Q		DIMENSION WAS .3192/.3152 IS .323/.313, DIMENSION WAS .3165/.3125 IS .328, MATERIAL WAS 1018/1020 CR IS 1018/1020/1025 CR, DIMENSION WAS .310 +0/-0.010 IS .310	2/19/2019	VM	VM



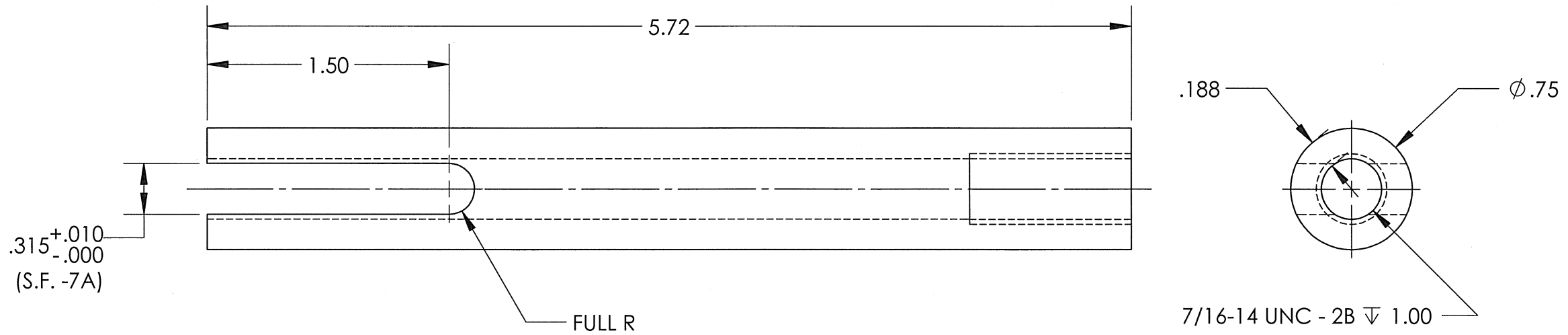
-7A

PIVOT BAR TAB

DART AEROSPACE	
TITLE M/R DAMPER LOAD TEST DEVICE	
DWG NO. RBT18520-7A	REV Q
MAT'L 1018/1020/1025 CR	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .005 FRACTIONS ± 1/8
FINISH SEE -7 WELDMENT	.XX ± .01 ANGLES ±1°
SPEC	.X ± .1 SURFACES = 125°
DRAWN BY: COLE	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: MACKOVJAK	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: VM	
SCALE N/A	DATE 8/17/2000
SHEET 7 OF 17	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
10	16-0096	-8 ADDED RADIUS TO END OF SLOT. CH'D DIMS WAS .188 WALL IS .19. WAS .315 SLOT S.F. -7A IS .315 +.010 -.000 (S.F. -7A).	8/4/2016	DPD	JAG
Q		MATERIAL WAS CDS IS A513 TYPE 5 DOM TUBING, DIMENSION WAS .315 +.010/-0 IS .323, DIMENSION WAS .19 IS .188	2/19/2019	VM	VM



TITLE
M/R DAMPER LOAD TEST DEVICE

DWG NO. RBT18520-8 REV Q

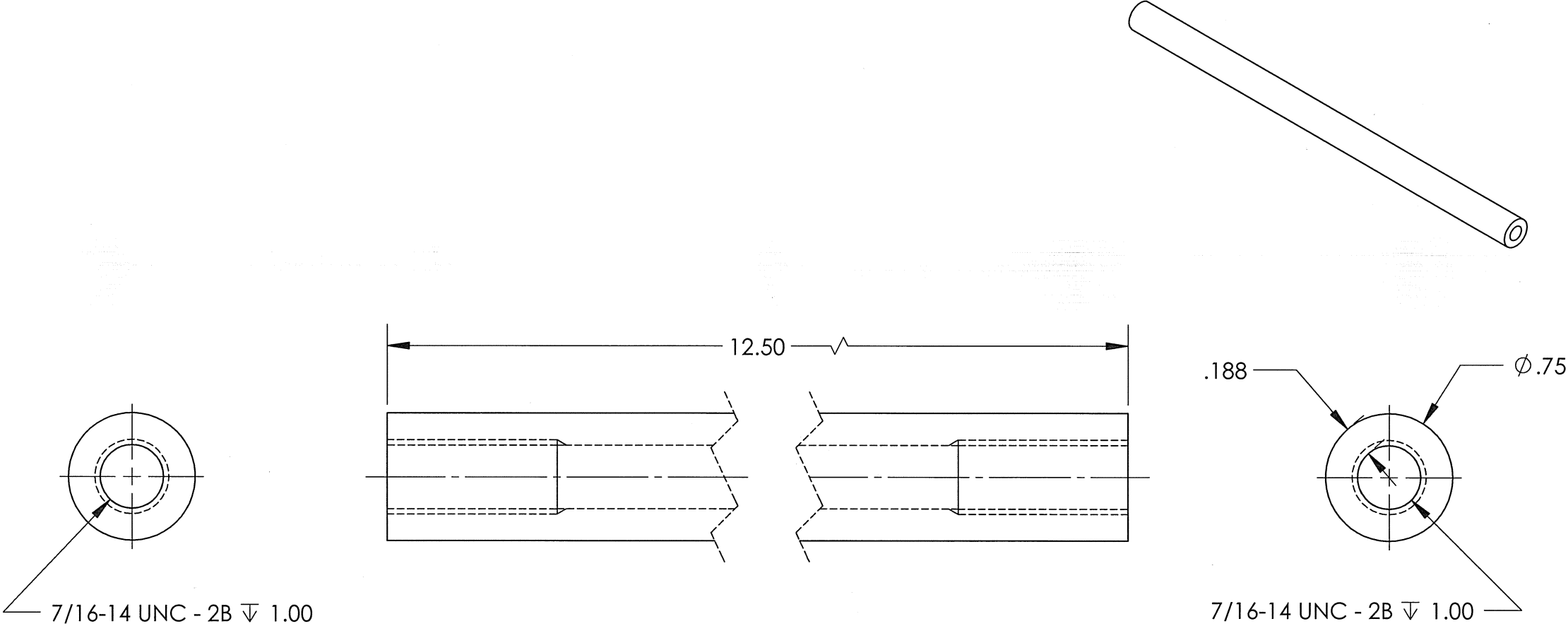
MAT'L A513 TYPE 5 DOM TUBING
HEAT TREAT
FINISH SEE -7 WELDMENT
SPEC
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
.XXX ± .005 FRACTIONS ± 1/8
.XX ± .01 ANGLES ± 1°
.X ± .1 SURFACES = 125°

DRAWN BY: COLE
CHECKED: MACKOVJAK
OPPS APPR: ANDERSON
QA APPR: LINDSAY
APPROVED: [Signature]
1. BREAK ALL SHARP EDGES
.015 x 45° OR .015R
2. DIMENSIONAL LIMITS APPLY
AFTER PLATING
3. INTERPRET DIM AND TOL PER
ASME Y14.5M-2009
USED ON MODEL

SCALE N/A DATE 8/17/2000 SHEET 8 OF 17

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
10	16-0096	-9 CH'D DIM WAS .188 WALL IS .19.	8/4/2016	DPD	JAG
Q		MATERIAL WAS CDS IS A513 TYPE 5 DOM TUBING, DIMENSION WAS .19 IS .188, FINISH SPEC CHANGED	2/19/2019	VM	VM

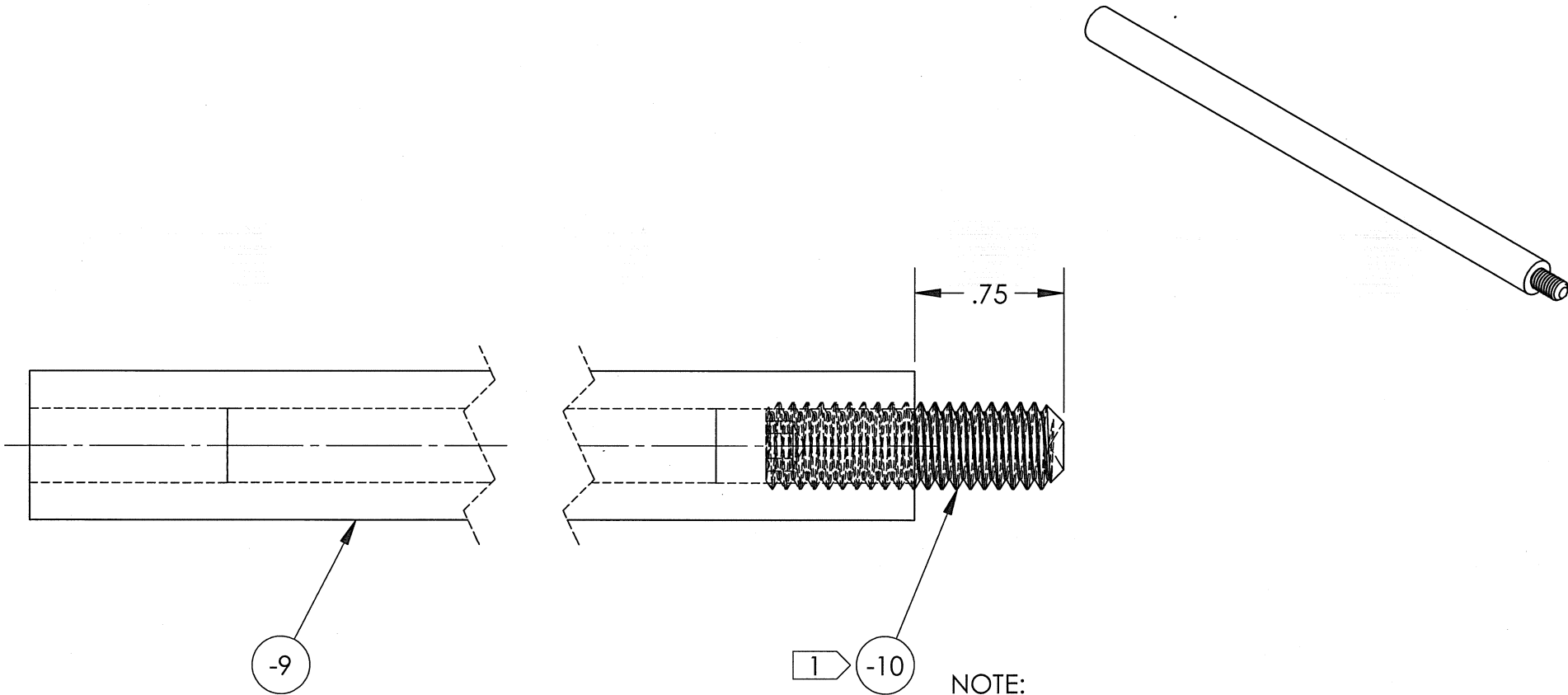


(-9)
EXTENSION

DART AEROSPACE	
TITLE M/R DAMPER LOAD TEST DEVICE	
DWG NO. RBT18520-9	REV Q
MAT'L A513 TYPE 5 DOM TUBING	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX \pm .005 FRACTIONS \pm 1/8
FINISH BLACK OXIDE	.XX \pm .01 ANGLES \pm 1°
SPEC BLACK OXIDE PER MIL-C-1204 CLASS 1 THEN APPLY A THIN LAYER OF OIL / CPC PER MIL-PRF-16173 GRADE 3 CLASS 1 OR MIL-C-8100 TYPE III OR MIL-C-8101A OR MIL-PRF-8100 AND Wipe Off Excess	.X \pm .1 SURFACES = 125✓
DRAWN BY: COLE	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: MACKOVJAK	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: VM	
SCALE N/A	DATE 8/17/2000
SHEET 9 OF 17	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
7		CH'D P/N -10 SETSCREW DEPTH TO .75 PER G.E.	9/28/2009	RJC	-
10	16-0096	-9A ADDED TO BOM.	8/4/2016	DPD	JAG
11	17-0069	-9A CH'D LOCTITE NUMBER WAS 609 IS 262.	3/22/2017	DPD	JAG
Q		NOTE 1 CHANGED	2/19/2019	VM	VM



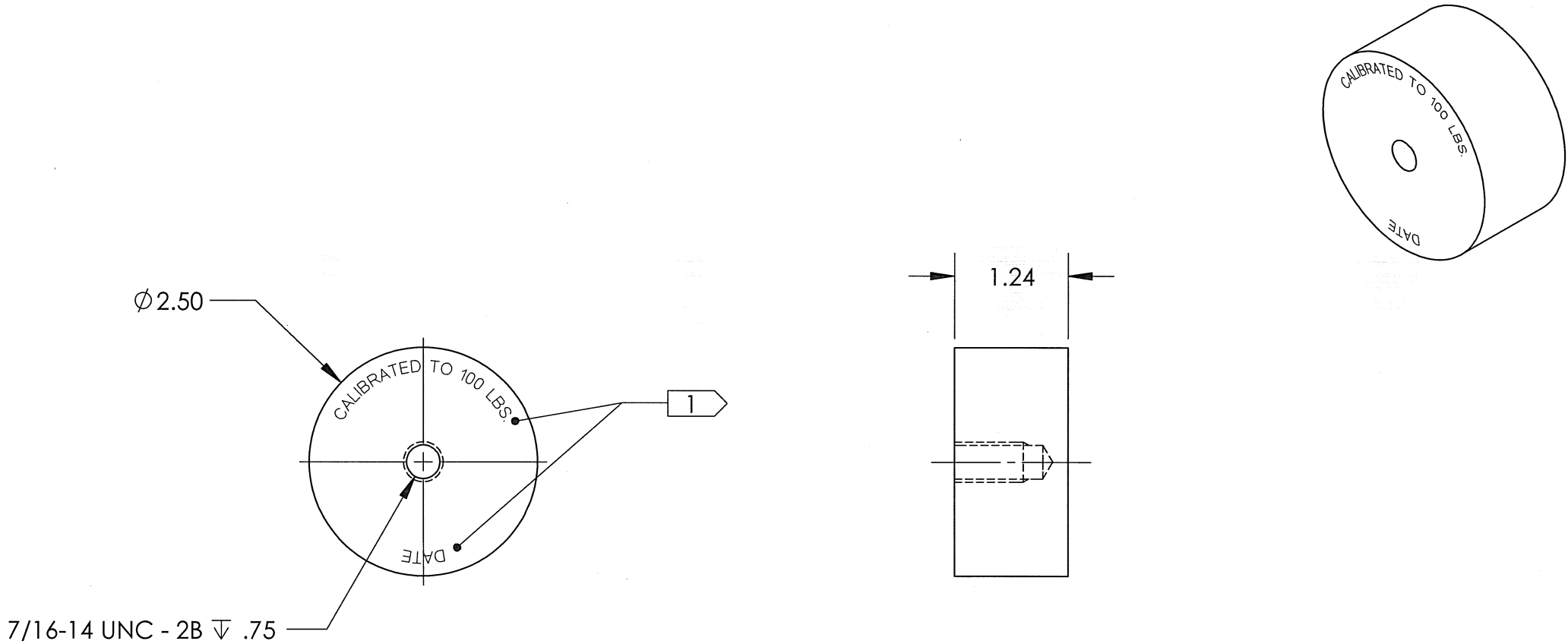
NOTE:
1) APPLY RED THREADLOCKER LOCTITE 263/262 ON THREADS OF ITEM -10 THEN ASSEMBLE WITH ITEM -9 AND REMOVE EXCESS, ALLEN HEAD IN

-9A
EXTENSION ASSEMBLY

TITLE M/R DAMPER LOAD TEST DEVICE	
DWG NO. RBT18520-9A	REV Q
MAT'L HEAT TREAT FINISH SPEC	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ±1° .X ± .1 SURFACES = 125°
DRAWN BY: COLE	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: MACKOVJAK	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED:	
SCALE N/A	DATE 8/17/2000
SHEET 10 OF 17	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
10	16-0096	-11 REMOVED RB LOGO, ACTUAL WEIGHT, AND OPERATORS INITIALS FROM ENGRAVE NOTE.	8/5/2016	DPD	JAG
11	17-0069	-11 CORRECTED SPELLING ON ENGRAVING WAS "CALIBRATIED" IS "CALIBRATED".	3/22/2017	DPD	JAG
Q		MATERIAL WAS BRASS IS BRASS 360	2/19/2019	VM	VM



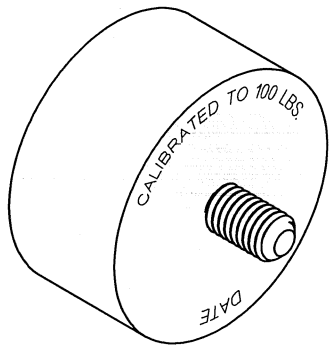
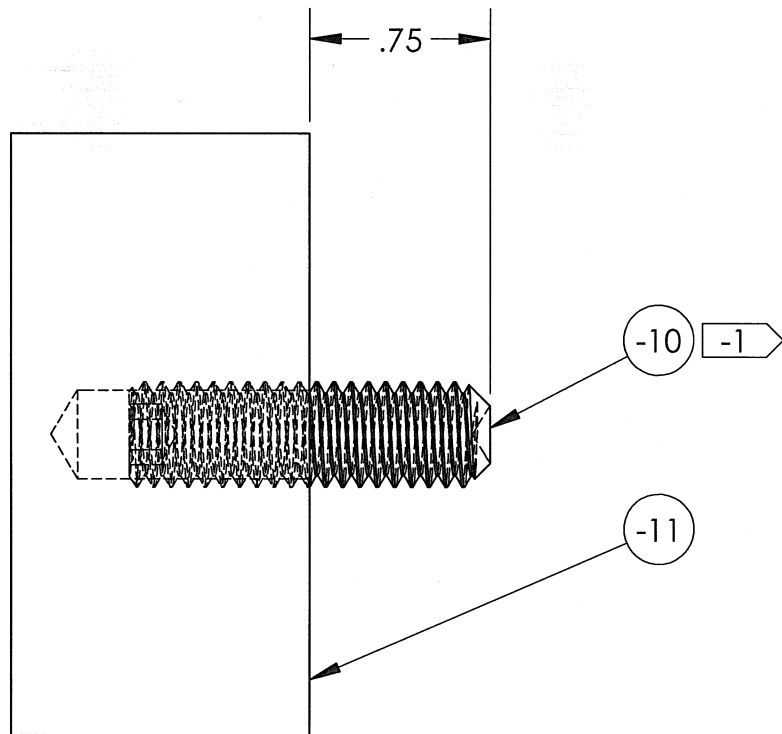
NOTE:
1)AFTER WEIGHT CERTIFICATION, ENGRAVE THIS SIDE WITH "CALIBRATED TO 100 lbs." & DATE.

(-11)
WEIGHT

TITLE M/R DAMPER LOAD TEST DEVICE	
DWG NO. RBT18520-11	REV Q
MAT'L BRASS 360	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT FINISH	.XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ±1° .X ± .1 SURFACES = 125/
SPEC	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
DRAWN BY: COLE	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
CHECKED: MACKOVJAK	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
OPPS APPR: ANDERSON	USED ON MODEL
QA APPR: LINDSAY	
APPROVED: VM	
SCALE N/A	DATE 8/17/2000
SHEET 11 OF 17	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
7		CH'D P/N -10 SETSCREW DEPTH TO .75 PER G.E.	9/28/2009	RJC	-
10	16-0096	-11A ADDED TO BOM.	8/5/2016	DPD	JAG
11	17-0069	-11A CH'D LOCTITE NUMBER WAS 609 IS 262.	3/22/2017	DPD	JAG
Q		NOTE 1 CHANGED	2/19/2019	VM	VM



NOTE:

- 1) APPLY RED THREADLOCKER LOCTITE 263/262 ON THREADS OF ITEM -10 THEN ASSEMBLE WITH ITEM -9 AND REMOVE EXCESS, ALLEN HEAD IN



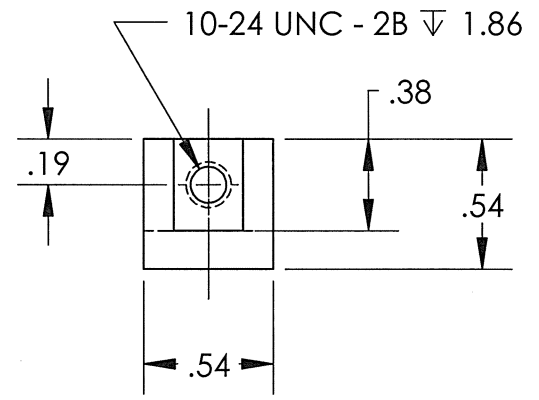
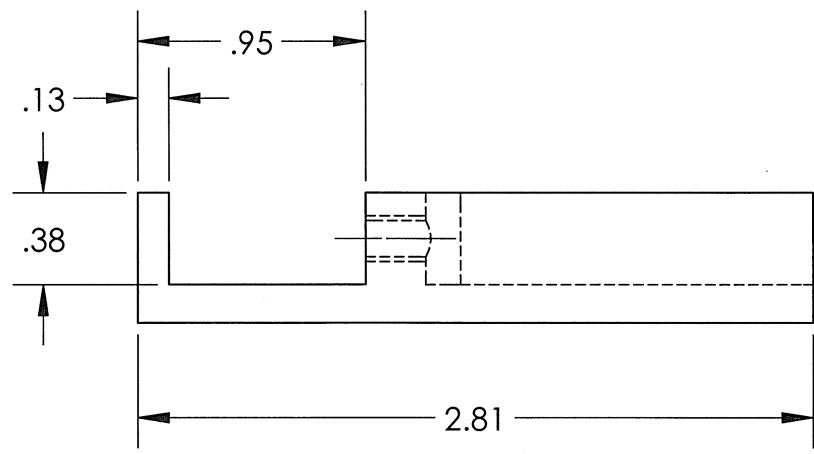
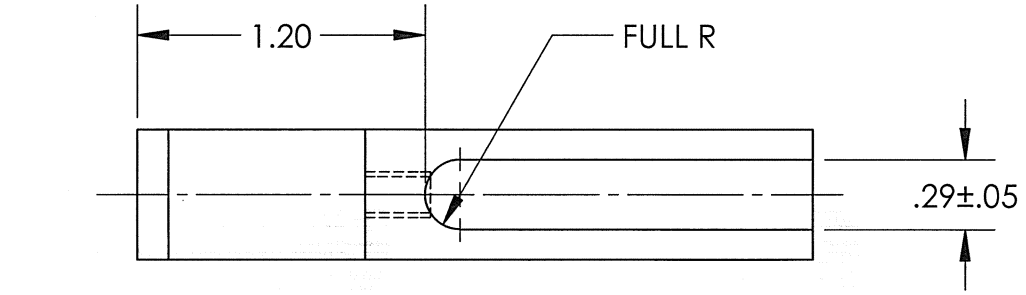
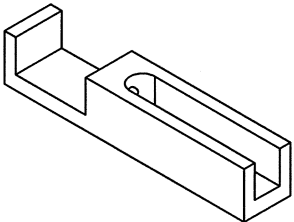
TITLE
M/R DAMPER LOAD TEST DEVICE

DWG NO. RBT18520-11A REV Q

MAT'L		UNLESS OTHERWISE SPECIFIED	
HEAT TREAT		DIMENSIONS ARE IN INCHES	
FINISH		.XXX ± .005 FRACTIONS ± 1/8	
SPEC		.XX ± .01 ANGLES ±1°	
DRAWN BY: COLE		.X ± .1 SURFACES = 125/	
CHECKED: MACKOVJAK		1. BREAK ALL SHARP EDGES	
OPPS APPR: ANDERSON		.015 x 45° OR .015R	
QA APPR: LINDSAY		2. DIMENSIONAL LIMITS APPLY	
APPROVED: VM		AFTER PLATING	
SCALE N/A		3. INTERPRET DIM AND TOL PER	
DATE 8/17/2000		ASME Y14.5M-2009	
SHEET 12 OF 17		USED ON MODEL	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
10	16-0096	-15 CH'D DIMS WAS R.125 IS FULL R, WAS 10-24 UNC IS 10-24 UNC-2B ∇ 1.86.	8/5/2016	DPD	JAG
Q		MATERIAL WAS 6061 IS 6061/7075	2/19/2019	VM	VM

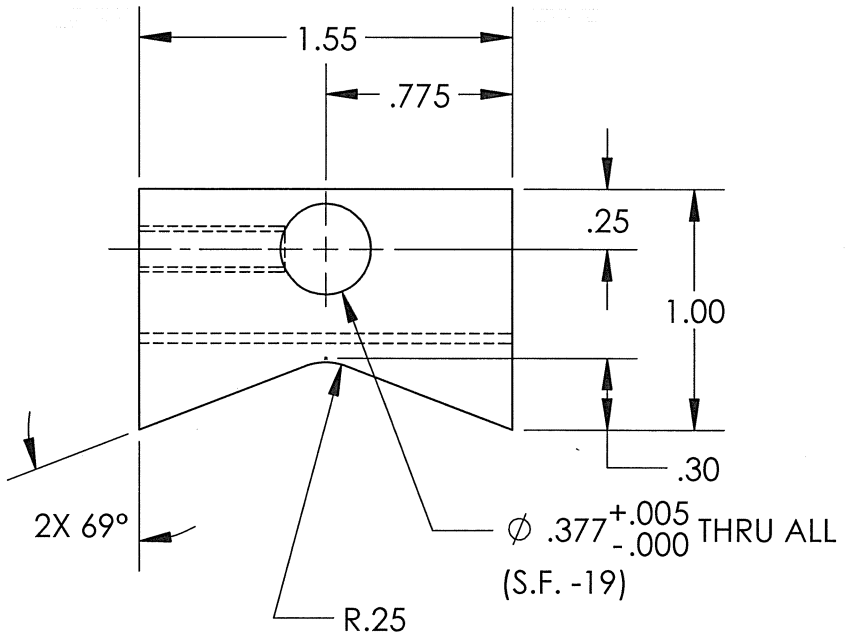
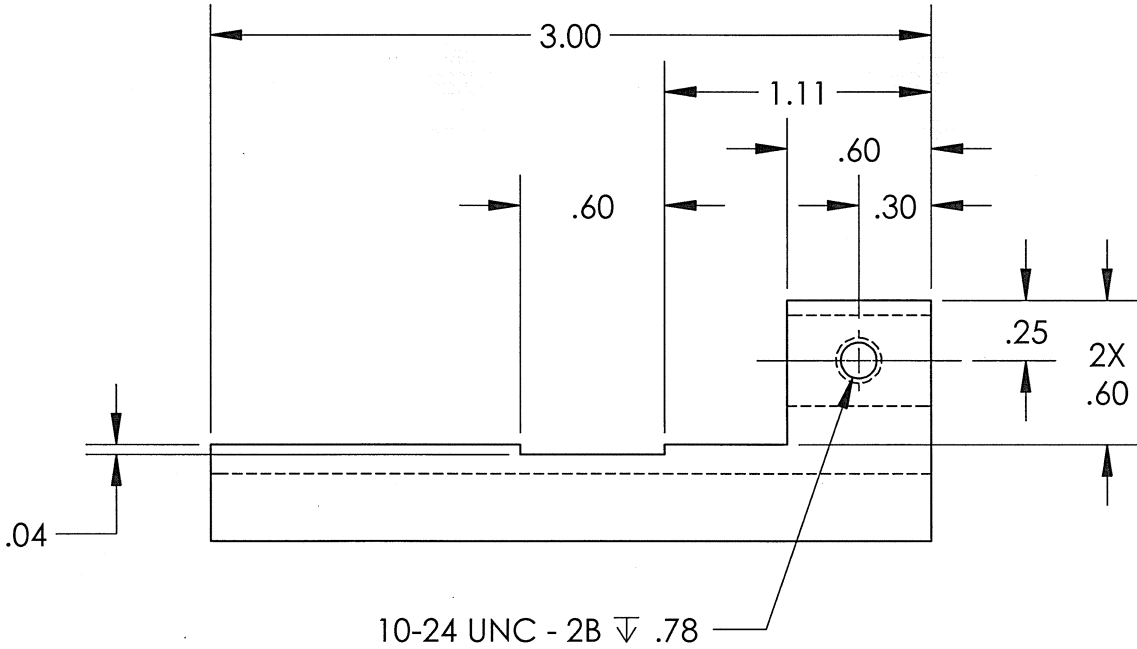
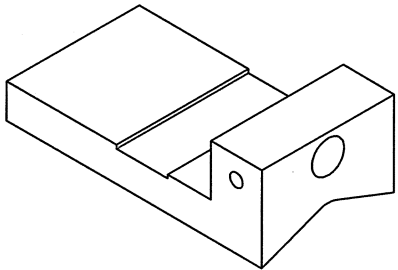


(-15)
CLEVIS BRACKET

TITLE M/R DAMPER LOAD TEST DEVICE	
DWG NO. RBT18520-15	REV Q
MAT'L 6061/7075	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .005 FRACTIONS ± 1/8
FINISH BLACK ANODIZE	.XX ± .01 ANGLES ±1°
SPEC MIL-A-8625F, TYPE II, CLASS II	.X ± .1 SURFACES = 125✓
DRAWN BY: COLE	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: MACKOVJAK	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED:	
SCALE N/A	DATE 8/17/2000
SHEET 13 OF 17	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
9		-16 ADDED R.25 LEFT .30 DIM. TO THEORETICAL POINT.	8/7/2013	RJC	DW
10		-16 CH'D DIMS WAS .60 IS 2X .60, WAS 2X .775 IS .775.	8/5/2016	DPD	JAG
Q		MATERIAL WAS 6061 IS 6061/7075, DIMENSION .375 CHANGED FOR .377 +.005/-0	2/19/2019	VM	VM



-16

INDICATOR BRACKET

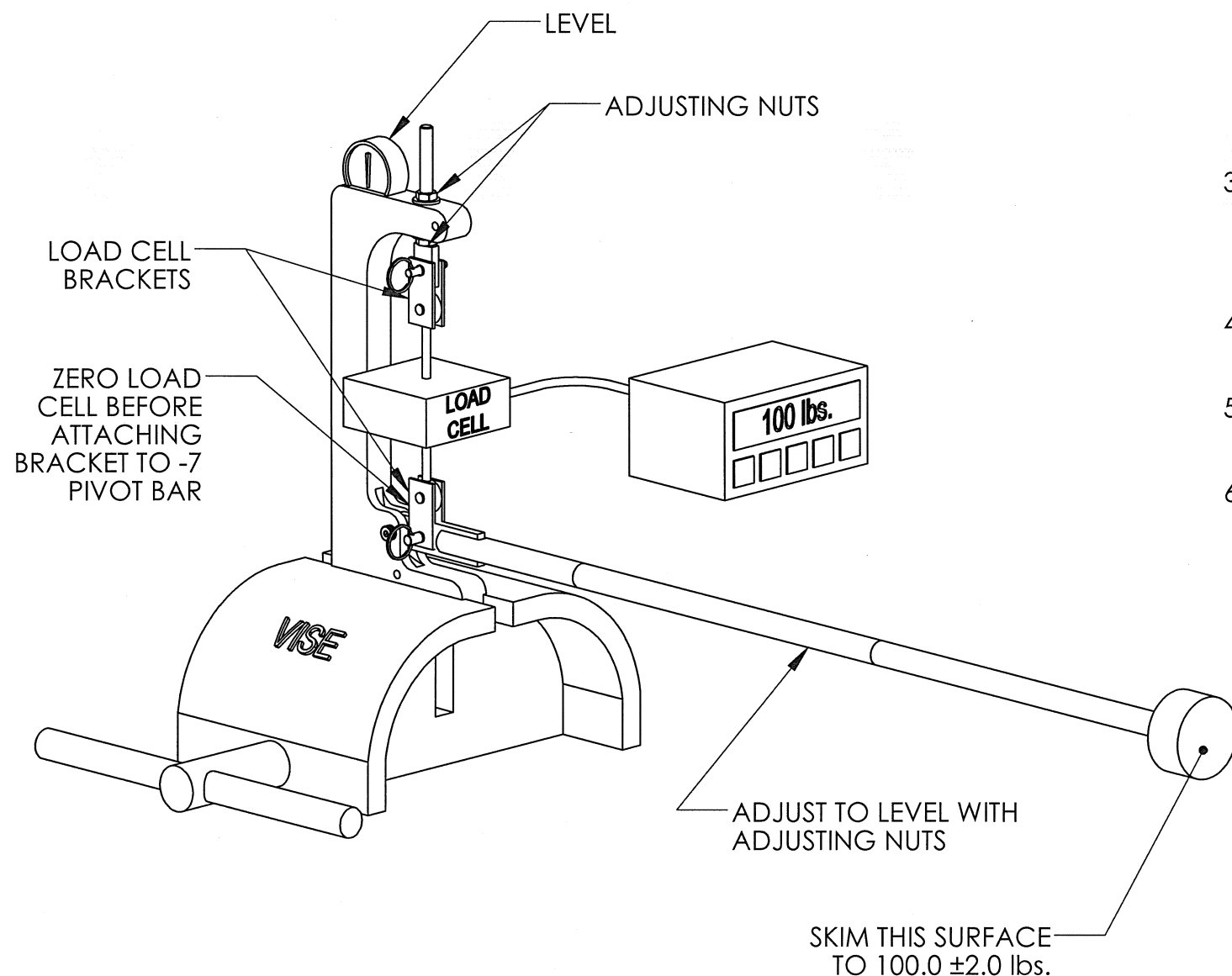


TITLE
M/R DAMPER LOAD TEST DEVICE

DWG NO. RBT18520-16 REV Q

MAT'L 6061/7075		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ±1° .X ± .1 SURFACES = 125/		
HEAT TREAT				
FINISH BLACK ANODIZE				
SPEC MIL-A-8625F, TYPE II, CLASS II				
DRAWN BY:	COLE	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009		
CHECKED:	MACKOVJAK			
OPPS APPR:	ANDERSON			
QA APPR:	LINDSAY			
APPROVED:	VP	USED ON MODEL		
SCALE	N/A	DATE	8/17/2000	SHEET 14 OF 17

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TESTING PROCEDURES:

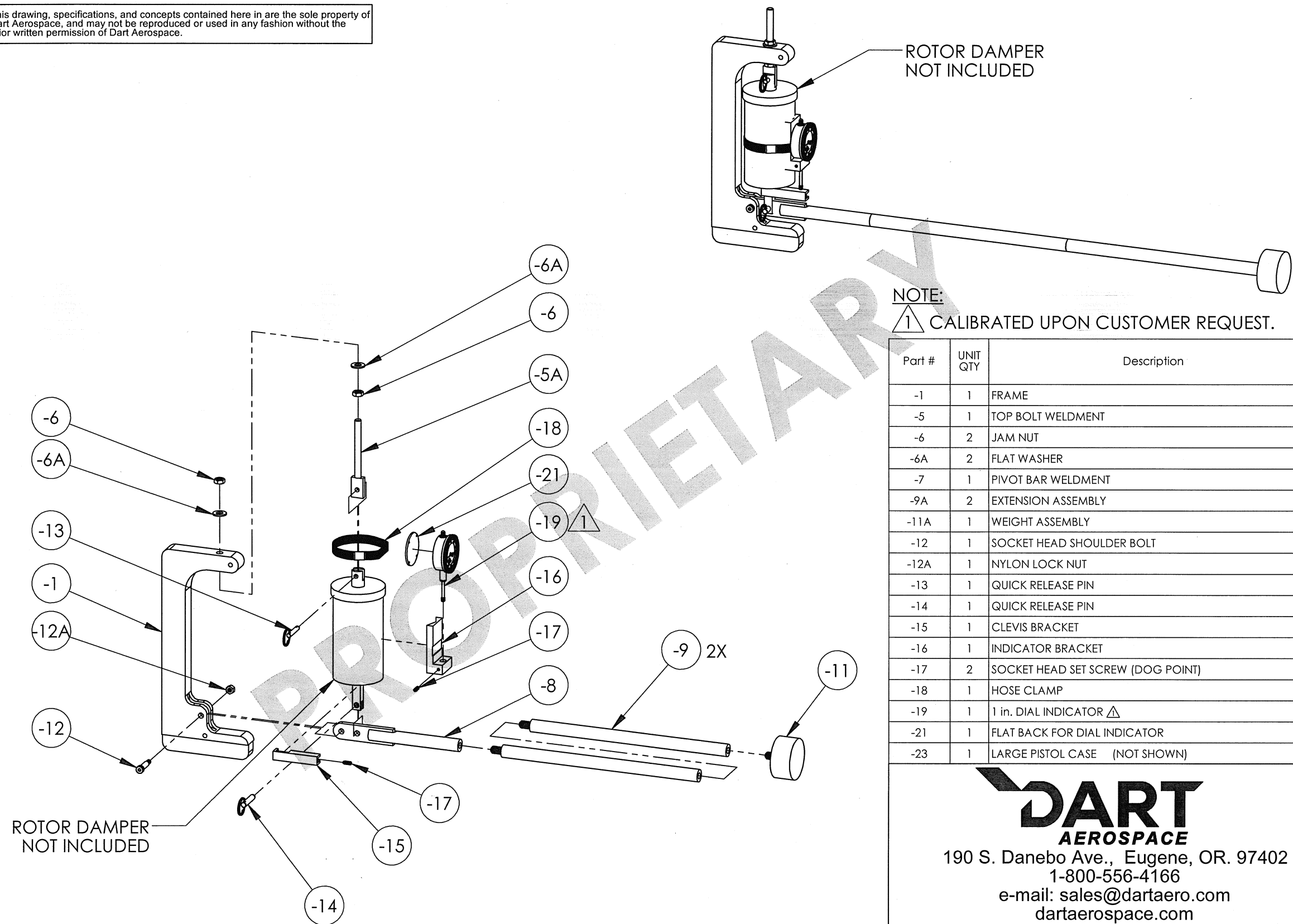
1. CLAMP UNIT IN VISE AS SHOWN, BE SURE UNIT IS LEVEL.
2. ATTACH THE LOAD CELL TO THE TOP ADJUSTING SCREW WITH BRACKETS AND SCREWS. MAKE SURE THAT THE LOAD CELL IS ALIGNED WITH THE ADJUSTING SCREW. ATTACH THE BOTTOM BRACKETS TO THE LOAD CELL, BUT DO NOT ATTACH THE BRACKETS TO THE -7 PIVOT BAR. PLUG THE LOAD CELL INTO THE DISPLAY AND PROPERLY PROGRAM THE DISPLAY. BE SURE TO ZERO THE LOAD CELL BEFORE CONTINUING.
3. ATTACH THE LOAD CELL BOTTOM BRACKETS WITH -14 PIN TO THE -7 PIVOT BAR, BE SURE THAT THE LOAD CELL IS ALIGNED WITH THE CENTER LINE OF UNIT.
4. ATTACH TWO -9A EXTENSIONS AND ONE -11A WEIGHT ASSEMBLY AS SHOWN.
5. LEVEL -9A EXTENSION ASSEMBLIES AND WEIGHT BY ADJUSTING THE TOP BOLT ADJUSTING NUTS.
6. SKIM THE FRONT FACE OF -11 BRASS WEIGHT UNTIL THE LOAD CELL REGISTERS 100.0 ± 2.0 lbs. THE -9A EXTENSION ASSEMBLIES MUST REMAIN LEVEL THROUGH THIS PROCESS. WHEN -11 HAS REACHED IT'S PROPER WEIGHT, THE UNIT IS CALIBRATED. BE SURE TO ENGRAVE THE PROPER INFORMATION ON THE -11 BRASS WEIGHT.

DART
AEROSPACE

190 S. Danebo Ave., Eugene, OR. 97402
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dartaerospace.com

TITLE M/R DAMPER LOAD TEST DEVICE			
DWG NO. RBT18520	REV Q	WEIGHT TEST 1 OF 1	
SCALE N/A	DATE 8/17/2000	SHEET 15 OF 17	

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NOTE:
1 CALIBRATED UPON CUSTOMER REQUEST.

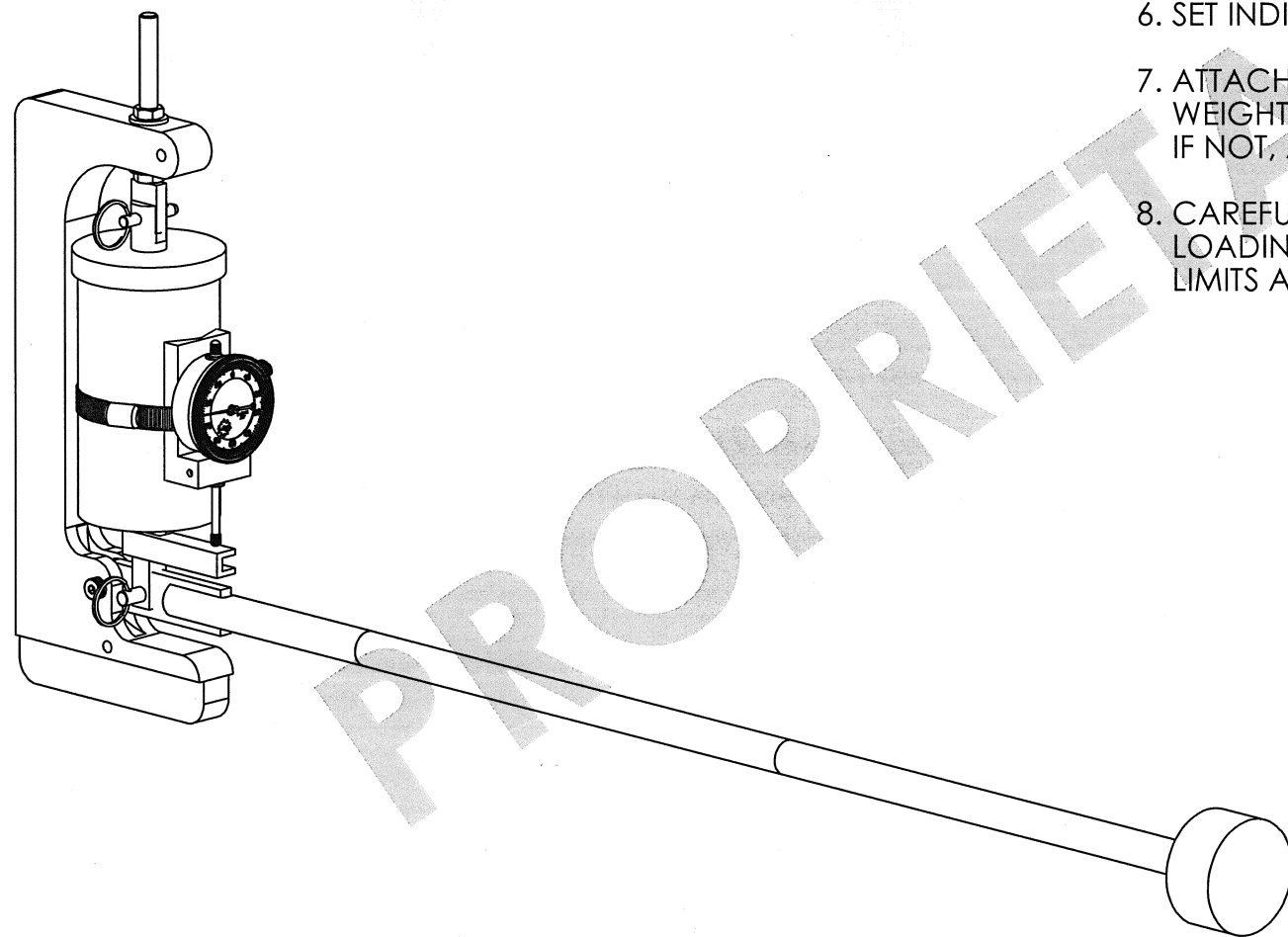
Part #	UNIT QTY	Description
-1	1	FRAME
-5	1	TOP BOLT WELDMENT
-6	2	JAM NUT
-6A	2	FLAT WASHER
-7	1	PIVOT BAR WELDMENT
-9A	2	EXTENSION ASSEMBLY
-11A	1	WEIGHT ASSEMBLY
-12	1	SOCKET HEAD SHOULDER BOLT
-12A	1	NYLON LOCK NUT
-13	1	QUICK RELEASE PIN
-14	1	QUICK RELEASE PIN
-15	1	CLEVIS BRACKET
-16	1	INDICATOR BRACKET
-17	2	SOCKET HEAD SET SCREW (DOG POINT)
-18	1	HOSE CLAMP
-19	1	1 in. DIAL INDICATOR 1
-21	1	FLAT BACK FOR DIAL INDICATOR
-23	1	LARGE PISTOL CASE (NOT SHOWN)

DART
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TITLE M/R DAMPER LOAD TEST DEVICE			
DWG NO. RBT18520	REV Q	CUSTOMER 1 OF 2	
SCALE N/A	DATE 8/17/2000	SHEET 16 OF 17	

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INSTRUCTIONS:

1. CLAMP -1 TESTER FRAME SECURELY IN A BENCH VISE.
2. ATTACH -16 BRACKET AND -19 DIAL INDICATOR TO OUTER CASE OF DAMPER WITH -18 HOSE CLAMP.
3. ATTACH -15 BRACKET TO DAMPER CLEVIS USING BRACKET SETSCREW.
4. ATTACH DAMPER TO -5 TOP BOLT WITH -13 PIN.
5. ADJUST -19 DIAL INDICATOR TO A POSITION THAT ENSURES ENOUGH TRAVEL FOR TEST.
6. SET INDICATOR DIAL TO ZERO.
7. ATTACH DAMPER CLEVIS TO -7 PIVOT BAR WITH -14 PIN. WEIGHTED ARM SHOULD BE HORIZONTAL AT START OF TEST, IF NOT, ADJUST -5 TOP BOLT ADJUSTING NUTS ACCORDINGLY.
8. CAREFULLY APPLY WEIGHT TO DAMPER AS TO AVOID SHOCK LOADING. REFER TO MDHC MAINTENANCE MANUAL FOR SERVICE LIMITS AND ADDITIONAL INFORMATION.

NOTE:

SUPPORT WEIGHT ARM SO THAT NO LOAD IS ON THE DAMPER UNTIL YOU ARE READY TO PERFORM THE TEST.



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dartaerospace.com

TITLE
M/R DAMPER LOAD TEST DEVICE

DWG NO.	RBT18520	REV	Q	CUSTOMER 2 OF 2
SCALE	N/A	DATE	8/17/2000	SHEET 17 OF 17